DES MOINES TCE

IOWA

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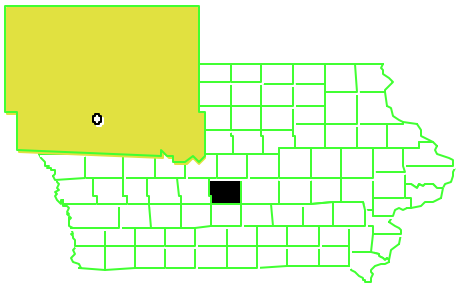


EPA Region 7

City:

County: Polk County

Southwest of downtown Des Moines

Other Names: Tuttle Street Landfill
Des Moines Vocational School
Dichem
Dico Company

05/07/2003

SITE DESCRIPTION

The Des Moines TCE site is an area of contaminated ground water located southwest of downtown Des Moines, in the flood plain of the Raccoon River. The surrounding area is industrial and commercial, with some recreational parklands. The city's public water supply, which serves approximately 260,000 people, was discovered to be contaminated with trichloroethylene (TCE) in 1976. The contamination was entering the water supply through the city's ground water source. The Dico Company, who used and disposed of solvent wastes containing TCE on their property through early 1979, was determined to be a potential source of the contamination. In 1984, the Des Moines Water Works stopped using the contaminated portion of the ground water supply. In 1986, the EPA ordered Dico to undertake the Agency's selected remedy to protect the city's public water supply. During cleanup activities, another plume (the North plume) of contaminated ground water was discovered as being drawn into the ground water extraction system. An investigation was subsequently initiated to address the contamination apparently originating to the north and west of the Dico property. In addition, investigations on Dico's property revealed that past herbicide and pesticide formulation activities had left contamination in several Dico buildings and adjacent soils.

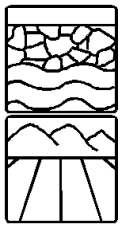
Site Responsibility:

This site is being addressed through Federal, state, and potentially responsible parties' actions. The state and DICO are currently conducting a program to monitor the contamination in the ground water.

NPL LISTING HISTORY

Proposed Date:	12/30/1982
Final Date:	09/08/1983
Deleted Date:	

THREATS AND CONTAMINANTS



The ground water and soil are contaminated with volatile organic compounds (VOCs), including tetrachloroethylene, TCE, and vinyl chloride, and pesticides and herbicides from former industrial operations and waste disposal practices. Accidentally ingesting or coming into direct contact with the contaminants poses a health risk.

CLEANUP APPROACH

Response Action Status

Initial Actions: Dico has cleaned several buildings on their property that were previously used to formulate and store pesticide and herbicide products. In addition, Dico has covered a large portion of their property with an asphalt cap to address the threat presented by the surface soil contamination. A group of parties potentially responsible for pesticide and herbicide contamination has excavated contaminated soils from drainage areas on and adjacent to Dico property and has arranged for off-site disposal of the soils.

Ground water: The remedy for the protection of the Des Moines water supply features: isolating the northernmost section of the public water supply system; collecting contaminated ground water with extraction wells; treating the ground water with an air stripper to remove contaminants; discharging the treated water to the Raccoon River; and operating the extraction wells until water collected from all monitoring wells meets EPA drinking water standards for four consecutive months. Dico, under EPA oversight, designed and built the ground water extraction and treatment system, which included seven extraction wells and an air stripping system. Cleanup activities began in December, 1987. Dico has and will continue to operate and maintain the ground water treatment system until cleanup criteria are achieved.

Source Control: In 1989, Dico began an intensive study of the sources of the pollution on its property. This investigation showed that contamination by VOCs and pesticides is of significant concern at the site. The studies have identified various source areas as well as potential remedies. The initial removal actions discussed above have addressed many of the health concerns associated with the source areas. EPA's selected remedial action, as documented in the December, 1996 Record of Decision, calls for continued maintenance of the three removal actions and land use restrictions to maintain an industrial

land use.

North Plume: In 1988, the EPA began investigating the potential sources of contaminated ground water being drawn into the Dico ground water extraction and treatment system. The EPA installed additional monitoring wells to the north and west of the Raccoon River near the Fleur Drive Bridge and north to about 25th and High Street. The wells have been monitored to determine the extent of contamination and its source(s), and to warn of any approaching danger to the public water supply. This investigation was completed in the spring of 1992, and the EPA concluded that no further action is warranted; the existing ground water extraction and treatment system will capture and clean up the contaminated ground water plume.

Site Facts: Facts: In 1986, the EPA issued an Administrative Order requiring Dico to design, build, and operate a ground water extraction system. Dico signed an Administrative Order on Consent with the EPA in August 1989 to conduct a study of how to control the potential sources of contamination at its property. A Unilateral Administrative Order (UAO) was issued to Dico in March, 1994, calling for a removal action to address threats inside several on-site buildings. A second UAO was issued to Dico in June, 1994, calling for a removal action to reduce threats posed by on-site soils. A group of additional potentially responsible parties identified in association with the pesticide and herbicide contamination, signed an AOC in December, 1995, requiring the parties to conduct a removal action to address threats posed by contaminated soil in drainage areas at the site.

ENVIRONMENTAL PROGRESS

Ground water cleanup at the Des Moines TCE site including a ground water monitoring program is currently underway which, along with the three initial removal actions, has reduced the potential for exposure to hazardous substances found at the site. Pesticide and herbicide-contaminated dust has been removed from several on-site buildings and the interior surfaces have been sealed to prevent exposure to any remaining pesticide and herbicide residues. In addition, exposure to pesticide-contaminated soils has been eliminated by capping a large portion of the Dico property, and removing contaminated soils from the site. Long term actions will include operation and maintenance activities necessary to ensure the continued protectiveness of the ground water extraction and treatment system and the asphalt cap. The EPA completed the third five-year review for the site in February 2003, which concluded that the actions taken at the site remain protective. The Five-Year Review Report is available in the site information repository.

SITE REPOSITORY

Des Moines City Library
100 Locust
Des Moines, IA 50308

Superfund Records Center
901 N. 5th St.
Kansas City, KS 66101
Mail Stop SUPR
(913)551-4038

REGIONAL CONTACTS

SITE MANAGER:	Mary Peterson
E-MAIL ADDRESS:	peterson.mary@epa.gov.
PHONE NUMBER:	(913) 551-7882
COMMUNITY INVOLVEMENT COORDINATOR:	Beckie Himes
PHONE NUMBER:	(913) 551-7003
E-MAIL ADDRESS:	himes.beckie@epa.gov
STATE CONTACT:	Bob Drustrup
PHONE NUMBER:	(515) 281-8900

MISCELLANEOUS INFORMATION

STATE:	IA
	0725
CONGRESSIONAL DISTRICT:	
	04
EPA ORGANIZATION:	SFD-IANE/SUPR

MODIFICATIONS

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